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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/556,092

11/09/2005

Markus Oles

280378US0PCT

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05/28/2010

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ALEXANDRIA, VA 22314

EXAMINER

LIGHTFOOT, ELENA TSOY

ART UNIT

PAPER NUMBER

1715

NOTIFICATION DATE

DELIVERY MODE

05/28/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/556,092	Applicant(s) OLES ET AL.	
	Examiner ELENA Tsoy LIGHTFOOT	Art Unit 1715	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 4 and 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

Amendment filed on April 1, 2010 has been entered. New claims 20-22 have been added. Claims 1-22 are pending in the application. Claims 4-5 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Claims examined on the merits are 1-3, and 6-22.

Abstract

A new abstract of the disclosure filed on April 1, 2010 has been entered.

Specification

The amendment to the disclosure filed on April 1, 2010 has been entered.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 22 recites “tridecafluoro-**1,1,2,2-tetrahydro**octyl-1-triethoxysilane”, which is confusing because **octyl** does not have C=C double bond in 1,2 position as being a *saturated* hydrocarbon radical such that 4 hydrogen atoms cannot be introduced into 1,1,2,2 positions to give **1,1,2,2-tetrahydro**octyl. For examining purposes the phrase was interpreted as “tridecafluoro-~~1,1,2,2-tetrahydro~~octyl-1-triethoxysilane”.

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Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, and 6-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nun et al (US 20020150724).

Nun et al is applied here for the same reasons as in the previous Office Actions.

As to claims 20-22, Nun et al teaches that the hydrophobizing agent includes tridecafluorooctyltriethoxysilane (Dynasilan 8262, Sivent GmbH) (See Example 2), and the particles include metal oxides, silicas, polymers, and silica-coated metal powders, particularly preferably fumed silicas or **precipitated silicas** (See P24). Thus, hydrophobizing step would be effected by crosslinking inherently since the process of Nun et al is substantially identical to that of claimed invention. Note that it is well known in the art that ethoxy silyl (i.e. Si-O-CH₂CH₃) groups in the silane are *reactive* groups that hydrolyze into silanol groups Si-OH that react with OH-groups on the silica surface (See P24 of Published Application).

5. Claims 1-3, and 6-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nun et al '724 in view of Baumann et al '739 for the reasons of record set forth in paragraph 11 of the Office Action mailed on 9/16/2009.

Response to Arguments

Applicant's arguments filed April 1, 2010 have been fully considered but they are not persuasive.

(A) Applicants submit that Nun et al. discloses the hydrophobicization of particles in paragraph [0025], in paragraph [0028], the fluorine-containing compounds of the carrier are disclosed, and in paragraphs [0046] and [0047], particles with hydrophobic properties achieved with perfluoroalkylsilanes are disclosed. However, Nun et al. remain silent about how to achieve the *combination of the properties* as claimed in the present invention.

The Examiner respectfully disagrees with this argument. The Examiner maintains her position stated in the Final Office Action mailed on 9/16/2009 that the produced surfaces would have claimed properties including self-cleaning, oleophobic, lipophobic and lactophobic properties, since the surfaces would be produced by the process substantially identical to that of claimed invention. Furthermore, it is well settled that the fact that applicant has recognized another advantage which would **flow naturally** from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

(B) Applicants submit that Nun as well as Nun in view of Baumann et al fail to disclose or suggest a method as claimed in which the substrate is a textile.

The Examiner respectfully disagrees with this argument. As discussed in the previous Office action, Nun et al discloses that their process may be used for producing self-cleaning surfaces on rigid objects, e.g. *sculptures* (i.e. ceramic, metal, glass substrates), greenhouses of **glass or Plexiglas®** (See P48); or on non-rigid objects, e.g. **umbrellas** or shower curtains (See P49). It is a common knowledge that umbrellas are typically made of textile*. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the process of Nun et al for producing self-cleaning surfaces to textile umbrellas because Nun et al does not limit its teaching to non-textile umbrellas.

(C) Applicants submit that there is no disclosure or suggestion in Nun or Nun in view of Baumann et al that the hydrophobizing is effected by crosslinking component i) on the particle surface. There is no disclosure or suggestion in Nun or Nun in view of

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Baumann et al that the hydrophobizing is effected by bonding the component i) to the particle surface. There is no disclosure or suggestion in Nun or Nun in view of Baumann et al that the component i) is tridecafluoro- 1,1,2,2-tetrahydrooctyl- 1 -triethoxysilane; 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyltriethoxyoligo-siloxane; 3,3,4,4,5,5,6,6,7,7,8,8,8- tridecafluorooctyltriethoxysilane; or an oligomerized cocondensate of 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyltriethoxysilane and 3-aminopropyltriethoxysilane. Therefore, the rejections of Claims 1-3 and 6-19 under 35 U.S.C. § 103(a) over Nun as well as over Nun in view of Baumann et al are believed to be unsustainable as the present invention is neither anticipated nor obvious and withdrawal of these rejections is respectfully requested.

The Examiner respectfully disagrees with this argument for the reasons discussed above. Nun et al does teach that the hydrophobizing agent includes claimed tridecafluorooctyltriethoxysilane (Dynasilan 8262, Sivent GmbH) (See Example 2). Thus, hydrophobizing step would be effected by crosslinking inherently since the process of Nun et al is substantially identical to that of claimed invention (See above).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELENA Tsoy LIGHTFOOT whose telephone number is (571)272-1429. The examiner can normally be reached on Monday-Friday, 9:00AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Elena Tsoy Lightfoot, Ph.D.
Primary Examiner
Art Unit 1715

May 27, 2010

/Elena Tsoy Lightfoot/